## REMARKS

Claims 1 to 23 are pending in this application; of which, claims 1, 11 and 20 are the independent claims. Favorable reconsideration and further examination are respectfully requested.

Applicants acknowledge the Examiner's indication that claims 5 to 9, 15 to 18, 22 and 23 would be allowable if rewritten in independent form including the base claim and any intervening claims; however, Applicants believe they are entitled to broader protection.

Claims 1 to 4, 10 to 14 and 19 to 21 were rejected under 35 U.S.C. §102(b) as being anticipated by Ackerman et al. (U.S. Patent No. 6,185,444).

Claim 1, is directed towards a method of imaging. The method includes receiving magnetic field gradient directions specified for an MRI scan of a microscopic structure, generating images for each magnetic field gradient direction, and collecting pixel information from the generated images for a given pixel of interest. The method also includes assembling the pixel data onto a surface of at least one sphere and determining properties of a diffusion function on the at least one sphere by transforming the pixel data assembled onto the surface of the at least one sphere using a spherical transform.

The applied art is not understood to disclose or to suggest the foregoing features of claim 1. In particular, Ackerman does not disclose or suggest determining properties of a

diffusion function on the at least one sphere by transforming the pixel data assembled onto the surface of the at least one sphere using a spherical transform.

Specifically, Ackerman discloses using 998 gradient vectors in imaging sequences for solid-state material such as bone and selecting gradient pulses that are " distributed isotopically throughout the spherical k-space" (see column 8, lines 52 to 67 of Ackerman). However, nowhere does Ackerman disclose or suggest a diffusion function much less determining properties of a diffusion function. Furthermore, Ackerman does not disclose or suggest determining properties of a diffusion function by transforming pixel data assembled on to a surface of a sphere. Ackerman never mentions a surface of a sphere much less determining properties of a diffusion function using pixel data on the surface of a sphere. Therefore, Ackerman does not disclose or suggest determining properties of a diffusion function on the at least one sphere by transforming the pixel data assembled onto the surface of the at least one sphere using a spherical transform.

Moreover, the applied art is not understood to disclose or to suggest assembling the pixel data onto a surface of at least one sphere. Specifically, Ackerman never mentions pixel data in conjunction with spheres or a surface of a sphere much less assembling pixel data onto a surface of a sphere. Therefore, Ackerman does not disclose or suggest assembling the pixel data onto a surface of at least one sphere.

Claim 11 is an article having corresponding features to claim 1. Claim 20 is a system having corresponding features to claim 1. Applicants submit that claim 11 and claim 20 are patentable for at least the same reasons as claim 1.

For at least the foregoing reasons, Applicant requests withdrawal of the art rejection.

Applicants submit that all dependent claims now depend on allowable independent claims.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intent to concede any issue with regard to any claim, except as specifically stated in this paper.

Applicants submit that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

All correspondence should be directed to the address below. Applicants' attorney can be reached by telephone at (781) 401-9988 ext. 23.

Enclosed is a Petition for a Two-Month Extension of Time. No other fee is believed to be due for this Response; however, if any other fees are due, please apply such fees to Deposit Account No. 50-0845 referencing Attorney Docket MGH-027AUS.

Respectfully submitted,

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